

An aerial photograph of a Rio Tinto iron ore train traveling through a vast, arid landscape. The train, consisting of several locomotives and a long line of white freight cars, is moving along a curved track that winds through the dry, scrubby terrain. In the background, a large, flat-topped mountain rises against a blue sky with scattered clouds. The foreground shows a dirt road and sparse vegetation.

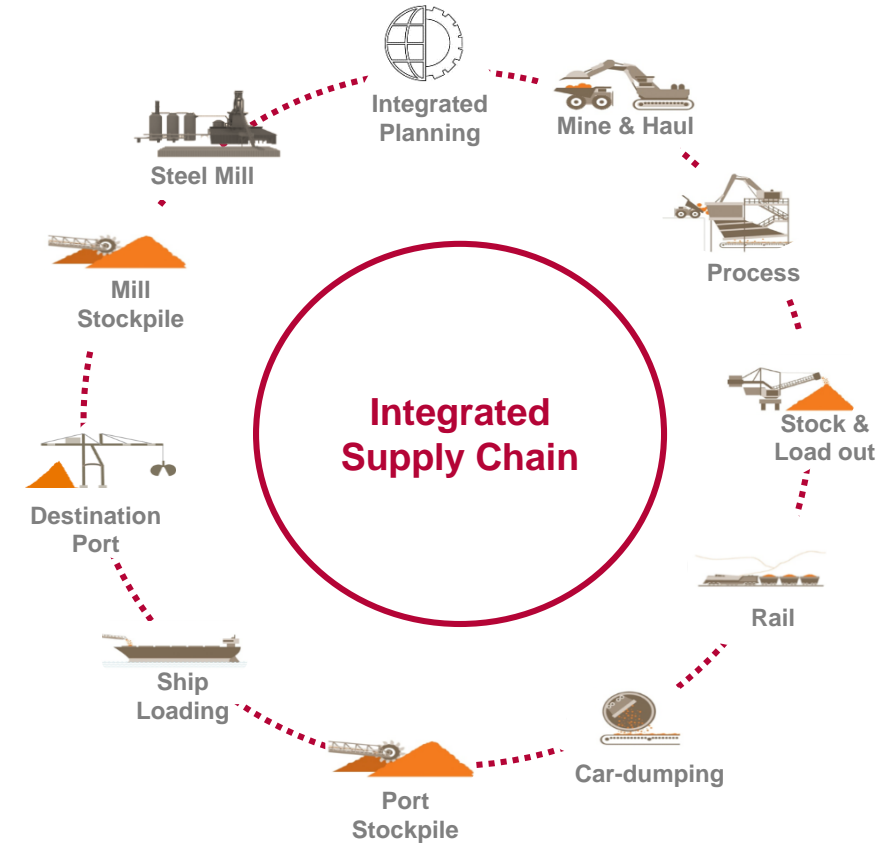
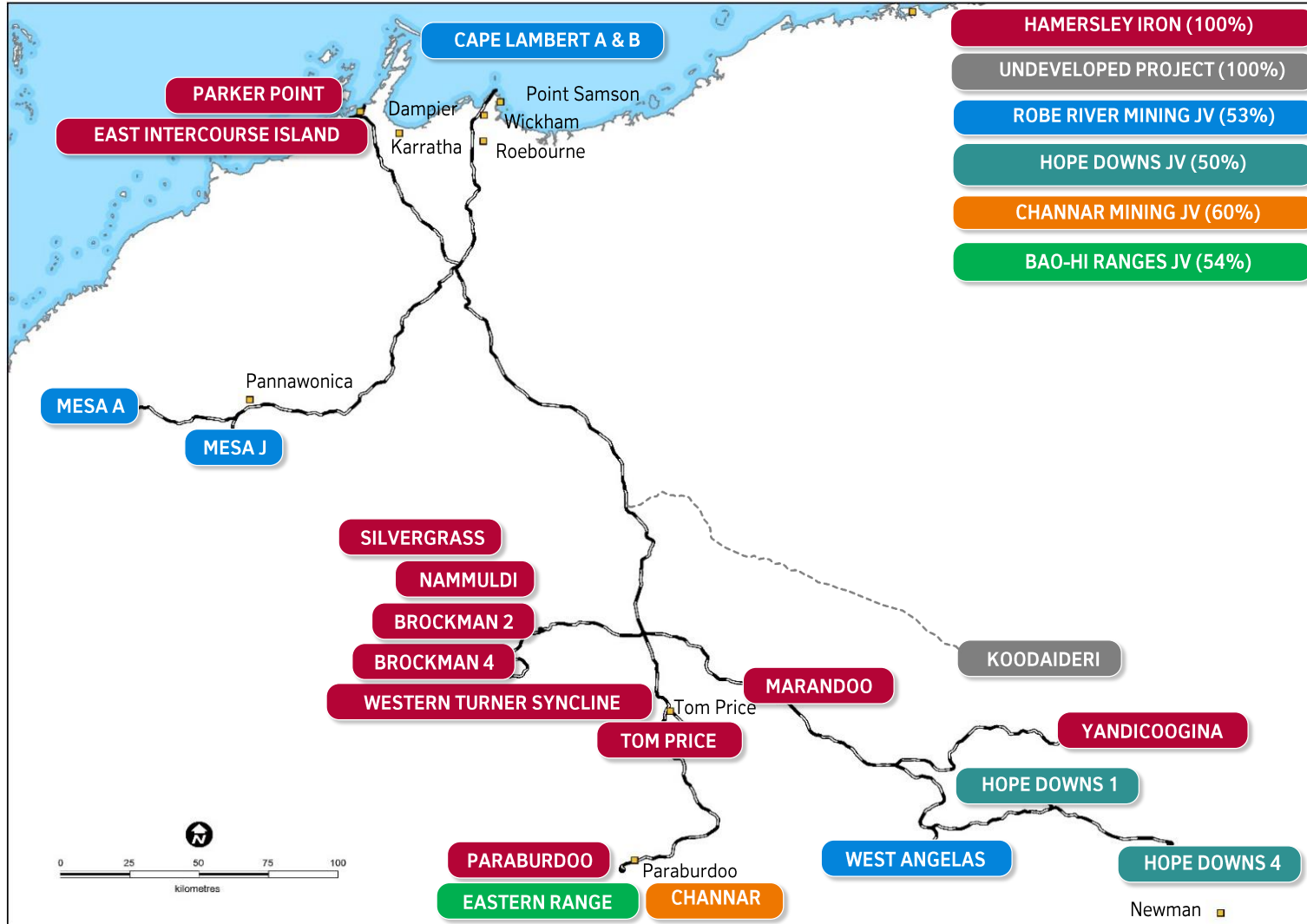
RioTinto

Infrastructure safety and productivity – what can we learn from the mining industry?

Chris Salisbury

Iron Ore chief executive

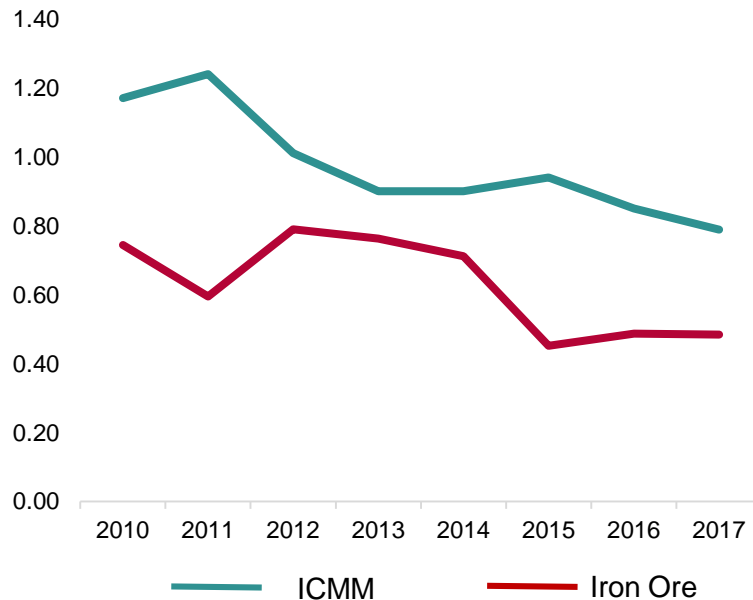
Rio Tinto Iron Ore is a fully integrated and agile network



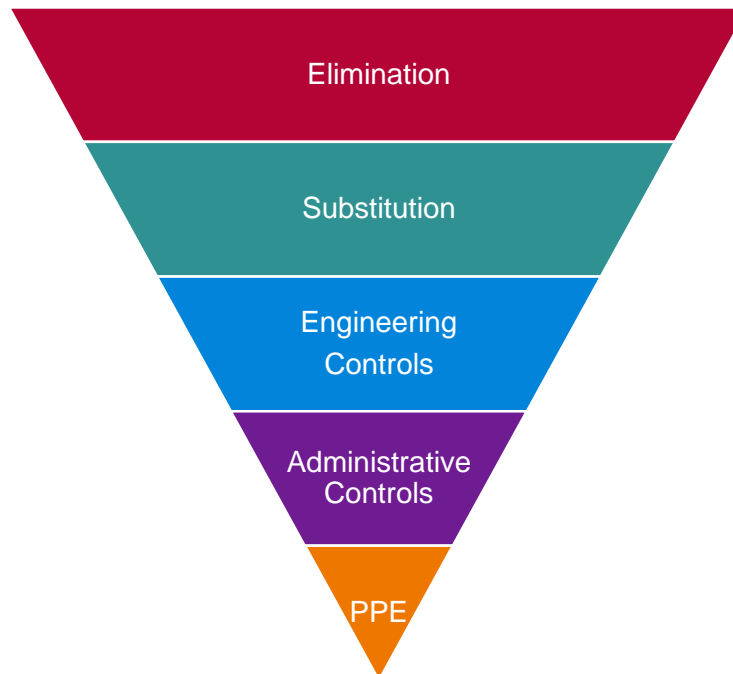
Zero harm drives us to innovate

Strong safety performance

All injury frequency rate per 200,000 hours



Hierarchy of controls



Our goal is zero harm

- ☐ Fatality prevention
- ☐ Reducing injury and illness
- ☐ Catastrophic event prevention

We have been building our integrated system; underpinned by advancements in technology...



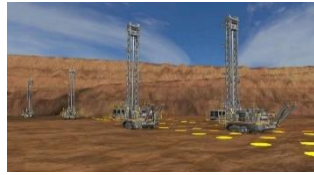
2007

Operations Centre
and automated truck
trials (AHS)



2009/10

Automated trucks
Pilbara 'A Pit' trial



2010/11

Autonomous Drilling
System (ADS) trial



2014

Deployment of ADS
and RTVis™



2016

Mobile-device
production reporting



2017/18

First Autonomous
Drill deployment /
retrofit commences



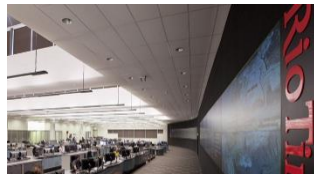
THE FUTURE

Koodaideri - the
intelligent mine



2008

Automated
train trial (manned)



2010

Operations Centre
commissioned



2012

Automated truck
deployments



2015

Transition automated
truck control to the
Operations Centre



2017

First unmanned rail
journey First AHS
retrofit ADS to OC



2018

AutoHaul® -
Regulatory approval
and first loaded
production train.
VET Skills Launch

We are continuing to reshape our future....

Machine / asset automation

Autonomous drills (ADS)
Autonomous haulage system (AHS)
AutoHaul®



Networked machines

Machine to machine control loops
Control systems connected
at all interfaces
Data and visualisation tools



End to end value optimisation

Artificial Intelligence across
the entire system
Dynamic System Optimisation
Advanced Decision Support



A fully integrated system, mine to customer, focused on Value over Volume.

Underpinning our success are our people



Developing skills for the the future

Formal qualifications and on the job training.
Pioneering new qualifications



A culture underpinned by our
values – Safety, Teamwork
and Excellence



**11,500 employees and
contractors**

Driving sustainable productivity and cost
improvements across the supply chain

What can be learnt from Rio Tinto Iron Ore?

Be clear on your priorities -
safety is our number one



Digital disruption is having a
profound impact on our
industry's future



Productivity drives our
improvement

